

Bloodborne Pathogens

Computer Based Training

2002 COURSE OUTLINE

Login

- Individual password security is provided. All users must enter their first and last names, worksite location, job classification, and Social Security Number. Users describe themselves as either *Technical*-staff (i.e., persons with occupational exposure), *Administrative*-staff, or *Non-staff*. The computer program will document dates of training.

General Laboratory Access

- Explains who has access to laboratory areas and why.
- Provides basic Hazard Communication information on biologicals and chemicals typically found in the laboratory.
- Explains that biologicals are not airborne, unlike chemicals.
- Informs all users how to observe and avoid chemical exposures.
- Provides instructions in the event of a laboratory emergency.

The target audiences for General Laboratory Access are janitors, maintenance workers, clerical staff, and volunteer workers who do not have occupational exposures. Janitors and maintenance workers will not receive any further instruction and are forced to exit the program. Clerical and volunteer administrative support staff will be required to learn about navigation controls and complete the Bloodborne Pathogens Section titled Scope and Application.

User Instructions and Explanation of the Computer Program and Structure

- Navigation controls.
- Wait indicator (shows more information is coming).
- Pre-tests, which will be given before each section (learning unit).
- Learning objectives that will be presented before each section.
- Information, which is primarily text based, with a final test.
- The Bookmark page will show student progress through the course.
- Caution: complete each section - - do not quit part way through.
- Students are required to go through each section of the training and will earn "Free Review" after completion of all 7 sections.
- Students will have to enter their HBV vaccination status and sign a declination statement if they refuse to take HBV vaccinations.
- Course completion must be within 14 days.
- An OSHA report (documenting training) will generated after satisfactory course completion. Students are to give the OSHA report to their supervisor as documentation of completion

Scope and Application (Section 1)

- Who the training is for and why.
- Evidence submission and login procedures.
- **Workbook Section 3** for site specific procedures.
- Evidence opening in DOJ BFS restricted laboratory areas.
- Personal protective equipment (PPE) for opening evidence.
- Labeling Blood Alcohol evidence.
- Protecting administrative staff from contaminated evidence.
- **Workbook Section 4** for site specific procedures.
- DOJ BFS policy to protect administrative staff and subsequent handlers of evidence released to court.
- BFS will pay for HBV vaccinations for administrative staff when there is a personal concern (and without occupational exposure).
- How non-Technical staff can obtain HBV vaccinations.

Definitions (Section 2)

- Video introduction to Dr. Jon Rosenberg (principal author of Cal/OSHA's Bloodborne Pathogens standard CCR T8 5193, and currently Chief of Communicable Disease Surveillance Branch with the California Department of Health Services).
- Define the following terms:
 - Blood, Otherwise Potentially Infectious Materials (OPIMs), Contaminated, Decontamination, Sterilize, Exposure Incident, Sharps, Engineered Sharps Injury Protection, *etc.*
 - (Workbook Section 5** for site specific information on procedures after an Exposure Incident), Parenteral, Occupational Exposure, Handwashing Facility, Laboratory Ventilation, Bloodborne Pathogens, HBV, HCV, HIV, Etiology, AIDS, Personal Protective Equipment (PPE), PPE for non-bloodborne pathogens (airborne agents and sexually transmitted diseases) were included in the 2002 version.
 - (Workbook Section 6** for site specific information on Regulated Waste), Both OSHA Regulated and Dept. of Health Services Medical Waste are defined based on the physical form of the material at the time of disposal, DNA extraction removes nucleic acid from its envelope along with proteins necessary for establishing infection, Trauma Scene Waste and Infection (factors necessary for disease transmission).

Many of the definitions (above) are clarified using visuals (photographs), animation, and audio explanations by Drs. Rosenberg and McCurdy.

Pictorial demonstrations for the following are provided:

Small blood spill clean-up; a potential Exposure Incident; a glove removal technique; a handwashing technique; how to dispose of 1) blood contaminated Non-Regulated waste; 2) blood contaminated pipet tips, and 3) blood components after extraction with phenol chloroform for DNA analysis.

Exposure Control (Section 3)

- The CD-ROM computer based training program is the Exposure Control Plan for the DOJ BFS.
- Sharps Injury Log.
- Dr. Rosenberg explains what “reasonably anticipated” means.
- **Workbook Section 7** for site specific procedures.
- Exposure Determination (BFS Classifications).
- DOJ BFS job classifications with occupational exposure.
- Forensic tasks and activities that cause occupational exposure.
- BFS H&S Committee (frequency of Sharps usage and Sharps injuries)

Exposure Control is presented primarily as text/audio based information.

Methods of Compliance (Section 4)

- Dr. Rosenberg explains “Universal Precautions.”
- Work Practice and Engineering Controls.
- Recapping needles.
- BFS needle handling instructions
- San Diego County SO policy - Needle Submission
- Searches and evidence handling.
- Crimes scene handwashing.
- No aerosols are produced when the centrifuge top is down.
- Aerosols do occur at autopsy but no known infections.
- No routine hazards from bone dust and the cranial saw.
- Basic list of 7 Standard Microbiological Practices.

Personal Protective Equipment

- PPE described.
- Appropriate PPE is provided by the employer.
- “Appropriate” is defined.
- Responsibility for selecting PPE.
- When to use PPE.
- When to use eye and face protection.
- When to use body protection.
- Types and selection of gloves.
- Autopsy.

Housekeeping

- When and how to clean work surfaces.
- Use brush/dust pan, tongs, or forceps to pick up broken glassware.
- Contaminated sharps.
- Contaminated laundry.

Most of the information (above) is presented using visuals (photographs) and audio explanations by Dr. Rosenberg. A slide show is presented to show examples of when to use gloves

Hepatitis B Vaccinations (Section 5)

- Employer requirements to offer HBV vaccinations.
- **Workbook Section 8** site-specific information.
- How DOJ provides HBV vaccinations.
- Video Introduction to Dr. Stephen McCurdy, Director of the Occupational Medicine Residency Program at the University of California, Davis.
- Dr. McCurdy describes the disease caused by hepatitis C virus (HCV).

Drs. Rosenberg and McCurdy answer the following questions?

- What is HBV and what are my risks?
- How does the HBV vaccine work?
- How effective is the vaccine?
- What if someone does not produce antibodies?
- What can be done for those who do not produce antibodies?
- Is one vaccine better than the other?
- Is the in vitro vaccine safe?
- If I decline the vaccine, and have an Exposure Incident, won't HBIG be just as good?
- Is there a problem if I am late in receiving my 2nd or 3rd shot?
- **Workbook Section 9** site specific information.
- DOJ BFS Post-Exposure Medical Evaluation and Follow-up.
- DOJ BFS medical records and access.

This section is primarily audio and text-based.

Communication of Hazards (Section 6)

Labels and Signs

- On containers.
- On refrigerators.
- On shipping packages.
- Color and design of labels
- When signs are necessary for facilities (BSL 2 and 3).

Information and Training

- Selected excerpts from scientific literature:
 - Frequency of Exposure Incidents – Surgeons v. Law Enforcement.
 - Survival of HBV.
 - Survival of HIV.
 - Prevalence of diseases; HIV, HBV, HCV.
 - Seroprevalence of HIV in orthopaedic surgeons.
 - CDC - documented cases of occupationally acquired HIV.
 - Percutaneous injury risks of acquiring HIV.
 - First Aid recommended by AAOS.
 - No orthopaedic surgeons acquired HIV by aerosolized transmission.
 - The first autopsy acquired HIV infection.
 - Latest information on Hepatitis C.
- Highest to lowest types of exposure risks.
- 5 factors necessary for disease transmission.
- Symptoms of HIV and HBV.
- Videotape presentation: role of the CDC, public health issues within the context of a variety of communicable diseases, how to tell what disease you may have *via* physician diagnosis.
- How to recognize tasks and activities that cause exposure risks.
- **Workbook Section 10** NEW information since CD-ROM development, and site-specific information.
- Additional information available to DOJ BFS employees.
- Who DOJ BFS employees can contact to address questions.

This section provides numerous visuals (photographs), graphical animations, text-based excerpts, and a videotape presentation from Time Magazine. In Group Training Mode, the text-based excerpts displayed on the computer screen will be temporarily passed out to the students, and then collected prior to the written test. This is to allow individual students to complete the directed reading at their own pace.

New Information 2002 Version (Section 7)

BFS Safety Committee

- 2001 Review of sharps injuries & recommendations.
- 2001 Review of Exposure Control Plan & recommendations.

Corrections

- 1992 JAMA article – only surgeons with non-occupational risk factors were HIV positive.
- HIV and most all Sexually Transmitted Diseases are killed on drying
- The National Institute of Justice (NIJ) incorrectly recommended PPE for face protection, airborne pathogens, and STDs.
- The NIJ incorrectly defines what is biohazardous waste and disposal.

BSL2 practices are adequate at Crime Scenes (Dr. McCurdy)

How infectious if TB? (Dr. McCurdy)

BSL2 precautions are adequate for fecal contaminated evidence (Dr. McCurdy).

Individual Mode Recordkeeping

- Students are congratulated for completing the course.
- The 20-minute Final Test examination process and passing criteria are explained.
- Students may take the test or Freely Review any section.
- After successful completion of the Final Test, students enter their HBV vaccination status and/or commitment to take the vaccine.
- The Physician's Report (tasks and activities that cause occupational exposure) will print out if the student wants HBV vaccinations.
- The Cal/OSHA declination form prints out with the student's name and date if HBV vaccinations are declined.
- The OSHA Report prints out automatically to document course completion and HBV vaccination status.

Individual Mode Free Review of Course Content

- As long as the employee has access to the computer c: drive where the training records are located, they will be able to review any course material any time.

Group Training Mode Recordkeeping

- The computer will ask if there are any final questions or lesson Sections students would like to review before the test.
- Facilitator collects the directed reading handout.
- Facilitator passes out the written test that includes the HBV vaccination status questions. If an employee does not want HBV vaccinations they will have to sign the mandatory Cal/OSHA waiver.

END of Outline